# SAFETY ELEMENT



AN ELEMENT OF THE GENERAL PLAN

## CITY OF ESCONDIDO

AUGUST 1975

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## EXHIBITS

# City of Escondido

100 VALLEY BLVD., ESCONDIDO,
CALIFORNIA 92025
(714) 745–2200

DARRELL DAUGHERTY
COMMUNITY DEVELOPMENT DIRECTOR


August 6, 1975

Honorable Mayor and Members
of the City Council
Escondido, California, 92025

Mayor and Gentlemen:

Transmitted herewith is the recommended Safety Element of the General Plan. This element is designed to implement the goals, objectives and policies of the adopted General Plan and other adopted elements, while complying with the intent and purpose of applicable State law.

Respectfully submitted,

ESCONDIDO PLANNING COMMISSION

Glen DeJong, Chairman

JM:GD:cm

RESOLUTION NO. 2730

RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ESCONDIDO RECOMMENDING THE ADOPTION OF THE SAFETY ELEMENT, AN ELEMENT OF THE GENERAL PLAN, IN THE CITY OF ESCONDIDO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

WHEREAS, on July 1, 1975, the Planning Commission did hold a public hearing to consider recommending to the City Council the adoption of the Safety Element, an Element of the General Plan, in the City of Escondido; and

WHEREAS, a notice of hearing to consider the adoption of the Safety Element, an Element of the General Plan, pursuant to the provisions of Section 65302.1, Article 5 of the Government Code, was published in the Times Advocate, a newspaper of general circulation published in the City of Escondido, and the Affidavit of Publication is on file in the records of the Planning Commission; and

WHEREAS, the Planning Commission has completed studies for the Safety plan within and around the City of Escondido as prepared by the Planning Department; and

WHEREAS, the State of California has enacted the Planning and Zoning Law which provides for the adoption of general plans and separate elements; and

WHEREAS, after notice given as required by law, one Public Hearing was held on July 1, 1975 to consider the adoption of the"Safety Element", an element of the General Plan.

NOW THEREFORE, BE IT RESOLVED by the Planning Commission of the City of Escondido that it hereby adopts and recommends for approval to the City Council the "Safety Element, an Element of the General Plan."

PASSED, ADOPTED AND APPROVED by a majority vote of the Planning

Commission of the City of Escondido, at a regular adjourned meeting held on the 1st day of July, 1975 by the following vote, to-wit:

AYES: Commissioners Foster, Mutch, Vessels, DeJong Cate and Smith

NOES: Commissioners None

ABSENT: Commissioners Warren

Glenn C. DeJong

GLENN C. DEJONG, Chairman
Escondido Planning Commission

ATTEST:

Darrell Daugherty

DARRELL DAUGHERTY, Secretary
Escondido Planning Commission

I hereby certify that the foregoing Resolution was passed at the time and by the vote above stated.

Susan M. Beatty

Clerk of the Planning Commission

RESOLUTION NO. 75-148

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ESCONDIDO, CALIFORNIA, ADOPTING A SAFETY ELEMENT OF THE GENERAL PLAN OF THE CITY OF ESCONDIDO.

WHEREAS, the Planning Commission of the City of Escondido has, by Planning Commission Resolution No. 2730, approved a Safety Element of the General Plan after holding duly noticed public hearings thereon; and

WHEREAS, this City Council has held a public hearing after due and legal notice thereof as required by law; and

WHEREAS, this City Council is desirous at this time and deems it to be in the best public interest to so approve said Safety Element;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Escondido, California, as follows:

1. That the above recitations are true and correct.

2. That, upon due consideration of all the evidence submitted, said Safety Element of the General Plan of the City of Escondido is hereby adopted.

PASSED, ADOPTED AND APPROVED by the City Council of the City of Escondido, California, at a regular meeting thereof this 6th day of August, 1975.

AYES: Councilmen: Boyce, Harmon, Roberts, Skuba

NOES: Councilmen: None

ABSENT: Councilmen: Linthicum

APPROVED:

Lorraine H. Boyce
LORRAINE H. BOYCE, Mayor
City of Escondido, California

ATTEST:

LINA M. HILL, City Clerk
City of Escondido, California

STATE OF CALIFORNIA )
COUNTY OF SAN DIEGO : ss
CITY OF ESCONDIDO )

I, LINA M. HILL, City Clerk of the City of Escondido, California, hereby certify that I have compared the foregoing copy with the original resolution No. 75-148 passed and adopted by said City Council at a regular meeting thereof, at the time and by the vote therein stated, which original resolution is now on file in my office, and that the same is a full, true and correct copy thereof and has not been amended or repealed.

Witness my hand and the seal of said City of Escondido, this 8th day of August, 1975.

(SEAL)

Lina M. Hill

City Clerk

# INTRODUCTION

Within the physical environment there exist certain conditions and factors which may represent hazards to life and property. The potential for incurring these hazards increases as urbanization occurs. Therefore, these hazards should be identified and their consideration should be included in the planning and decision-making process in order to reduce the risks of loss of life, injury, and property damage or destruction.

The State of California has recognized the need for such consideration, and has included the following requirement in the State Planning and Zoning Law (Title 7 of the Government Code):

> "S65302.1. Inclusion of safety element for protection from fires and geologic hazards.
>
> The general plan shall also include, in addition to the elements specified in Section 65302, a safety element for the protection of the community from fires and geologic hazards including features necessary for such protection as evacuation routes, peak load water supply requirements, minimum road widths, clearances around structures, and geologic hazard mapping in areas of known geologic hazards."

This element has been prepared to identify hazardous conditions within the Escondido planning area and to propose policies and programs to mitigate such hazards where necessary, in fulfillment of the State requirement quoted above.

## FINDINGS

### FIRE HAZARD

The greatest potential hazard within the Escondido Planning area would appear to be the possibility of damage to property and loss of life due to fire, with the greatest potential hazard occurring within the unincorporated area.

Continuing improvements in traffic circulation, fire fighting equipment and facilities, development standards, inspection programs, and mutual aid and emergency preparedness plans offer residents of the City substantial fire protection.

On the other hand, residents within the unincorporated areas enjoy significantly lower levels of fire service whereas the fire hazard is significantly higher due to the proximity of grass and brush lands and adverse topography. The County is presently studying this problem.

### GEOLOGIC HAZARD

Based on information contained within the County Seismic Safety Element, there are no known major faults or landslide areas within the Escondido Study area. The only geologic hazard apparent at this time would be from ground shaking caused by earthquakes, originating along faults outside of the Planning Area. In this respect, structures on the valley floor may expect the greatest impact since the valley floor, once a river bed and flood plain for the Escondido Creek, is composed of unconsolidated alluvium soils. Stick-built or wood frame and stucco construction is the most common type of construction for housing, and is the most flexible and therefore the most desirable in terms of reducing damage related to ground shaking. The majority of other

types of construction occurs primarily within the CBD area, and was the object of a recent program aimed at the abatement of hazardous structures. New construction must conform to building code requirements which include seismic safety considerations.

A potential but improbable hazard may be inundation due to dam overtopping by waves generated by seismic activity, or dam failure. These problems will be investigated in the near future as part of studies required of dam owners by 1976.

Geologic hazards will also be more thoroughly investigated as part of the required Seismic Safety Element, and may require additions and modifications to the Safety Element.

## FLOOD HAZARD

In past history, the Escondido Valley has been subject to damaging floods caused by the overflow of Escondido Creek, Reidy Creek and their tributaries. Currently, Escondido Creek is fully improved as a lined channel within the City limits, Reidy Creek is partially improved and a program to bring the Master Plan of drainage up to 90 to 95% completion has been proposed for implementation over a five year period. Other portions of natural drainage courses are proposed to remain natural or be improved as environmental channels, including the unimproved sections of Reidy Creek, and Escondido Creek in the unincorporated areas of the Planning Area. With the completion of these improvements and the completion of flood plain studies now in progress and the subsequent application of flood plain zoning where necessary, future flood threat should be all but eliminated.

## EMERGENCY PREPAREDNESS

The City, through its Emergency Plan, City of Escondido, is a party to the Unified San Diego Emergency Service Agreement. This agreement provides for a standardization of plans for all communities within the County, for mutual aid in time of emergency and a detailed, systematic procedure for emergency operations, education, and information distribution. The City's plan, coordinating local effort with the regional plan, sets forth the responsibilities of various City staff members, and the necessary tasks for each type of emergency situation. The formulation of individual task plans has not been completed.

The City is also developing an emergency telephone system plan by which anyone can dial a universal three digit number (911), describe the emergency, and be connected with the proper local agency.

## EXISTING REGULATIONS

Many of the considerations necessary for the inclusion of safety factors in the decision-making process already exist in various ordinances, resolutions and processes in effect at the present time. Discussed in greater detail elsewhere in this report, these regulations include the Uniform Building Code (1973 edition), the Grading Ordinance, the Zoning Ordinance, and the Subdivision Ordinance. The application and continuing review of these regulations are weighed against the goals and objectives of the General Plan and its various elements, including the Master Plan of Drainage and the Master Plan of Circulation. Review of current development to assure compliance with adopted standards and regulations occurs through the Environmental Impact Report

process, the public hearing process and/or review through the Staff Development Committee.

## STUDIES IN PROCESS

Although existing regulations contain a significant amount of safety protection, several studies now in process are designed to investigate specific problem areas, and may result in modifications to existing ordinances and regulations, may result in new regulations, or may require modifications to this and other Elements of the General Plan. Among such studies are flood plain studies preparatory to application of flood plain zoning, dam failure inundation studies as required by the State, a development fee study to determine methods of financing capital improvements preparatory to finalizing a five year capital improvement program, and collection of data for the required seismic safety element.

In addition, the County has initiated or recommended initiation of several policies and programs as a result of studies related to their Safety and Seismic Safety Elements. While not yet adopted, the recommendations of these studies would represent desirable improvements within the unincorporated areas of our General Plan study area.

## RECOMMENDATIONS

The recommendations contained herein are in the form of suggested policies and programs to implement the primary goal of identifying and including safety considerations in the planning process, and mitigating hazardous conditions where possible based on the level of risk involved. A discussion of each of these is included within the appropriate sections which follow. Some require specific direction or action by the City Council for implementation. Others merely indicate an intent to continue existing policies or programs.

It is recommended that the following primary goal be adopted:

- Minimize the loss of life and destruction of property in the Escondido Planning Area by identifying fire, geologic, and other hazards, and adopt policies and programs to mitigate such hazards where possible.

It is recommended that the following secondary goals be adopted:

- Identify the level of risk acceptable to the community, through the public hearing process, for each class of risk identified.

- Maximize public safety considerations in the planning and decision-making process.

- Maximize emergency preparedness through the provision and maintenance of emergency equipment, services, and plans.

- Actively seek and encourage County participation in identifying and mitigating hazardous conditions within the unincorporated areas of the Escondido Planning Area.

In the sections which follow, specific policies and programs to implement each of the above are suggested for consideration and adoption.

## FIRE HAZARD

URBAN

The annual fire loss within the City has fluctuated greatly on a yearly basis, from $5.957 per capita in 1970 to $1.804 per capita in 1973. The average has been just over $3.50 per capita year. The wide range can be attributed to the ability of one or two large fires to inflate the valuation figures because of the relatively small area of the City. The current rate of fire calls is five to six per day, down from an average of fourteen just a year age.

The worst fire in the City's history occurred on May 23, 1929 when the largest and oldest building of the high school was destroyed. Even though the City of Escondido is relatively old by California standards, there are very few "old" or hazardous structures. Through an ordinance adopted in 1967, the City conducted a hazardous structures abatement program between 1967 and 1970 within the area bounded generally by Washington Avenue, Second Avenue, Orange Street and Ivy Street. Part of the program included the abatement of fire code deficiencies. This ordinance was replaced in 1971 by the Uniform Code for the Abatement of Dangerous Buildings, which subsequently has been replaced by the 1973 edition.

The Fire Department presently consists of two fully equipped and manned fire stations, with Fire Station No. 3 provided for in the current budget. The present level of service provides a 3 to 4 minute response time to most areas of the City, which will be extended to all areas upon completion of the new station. The current fire rating of the City for fire insurance purposes is 5, although individual insurance companies assign higher rates in specific cases based on their evaluation of response time and availability of fire hydrants. The

last city-wide rating occurred in 1960. Upon completion of the water filtration plant, the Fire Department expects to request a review of the fire rating based on this improvement, the completion of station No. 3, and the installation of additional fire hydrants.

The Fire Department also administers an annual weed abatement program, and is responsible for a continuing program of inspection of major buildings. It also conducts an education program through the local school district.

Various codes and policies also contain provisions for fire safety. Street standards related to width and cul-de-sac radius are based partially on emergency vehicle requirements, as are development review procedures related to project access and circulation. The zoning code segregates various types of uses, and specifies development standards based on type of use. Standards related to building setbacks and separation are historically rooted partially in fire safety standards. The City Development Standards require installation of fire hydrants where required, the provision of water facilities or their upgrading where necessary, and the provision of fire fighting facilities at the beginning of construction or when combustible materials are placed on-site.

Where adequate building separation cannot be expected, such as in commerical areas, the building codes require construction techniques which serve to contain fire, and may require other fire equipment such as sprinklers, extinguishers and standpipes. This is also true where hazardous occupancies may occur, as in the industrial area, or in such uses as schools, churches, hospitals, rest homes, etc.

Continued upgrading of fire standards and services can reduce this

hazard while reducing the citizens' cost for fire insurance.

RURAL

The fire hazard within the unincorporated portion of the Planning Area is significantly higher than within the City, as indicated by the fire insurance rating of 9. This is partly due to the proximity of grass and brush lands and adverse topography, and partly due to the relatively low level of fire service and response time. These problems are further compounded by seasonal Santa Ana wind conditions.

Brush fires within the watershed area of the Planning Area destroy about 725 acres per year, representing an average annual burn of 3.6% of the total of 20,000 acres of watershed. Such fires endanger life and property, and disrupt needed services and utilities. Typically, it takes two to three years for an area to recover with an acceptable growth of natural brush and ground cover, depending on soil, precipitation and topographic conditions. Recovery time may be increased by planting grasses, but typically this is not done. During the period of recovery, the potential for soil erosion and slope failure is greatly increased.

A pamphlet entitled "Fire Safety Guides for California Watersheds", prepared by the County Supervisors Association of California in cooperation with forest fire protection agencies defines "hazardous areas" as "generally being lands with slopes over 8 percent with a continuous vegetative cover." The booklet contains recommended minimum fire safety requirements related to construction, brush clearance, access, water facilities, lot sizes and building spacing (see appendix B).

Another booklet, prepared by the County of Los Angeles entitled "Fire-retardent Plants for Hillside Areas", contains planting recommendations (see appendix C). The State Public Resources Code (Section 4291) requires brush clearance around structures.

Fire protection within the unincorporated area is presently provided by the State of California Forestry Division. With units stationed in Valley Center and, during the winter months in San Marcos, response time to this area can exceed half an hour. Much of the unincorporated area, especially the older built-up area, does not have fire hydrants. Many of the older areas were developed to poor standards as regarding lot sizes, building construction, and access.

Some areas of the County are served by fire protection districts. However, various studies by both the City and the County have indicated that, locally, a special district tax for such district would equal or exceed the present City tax rate for all services.

Mitigating measures for some of these problems have been or are being implemented, however. The Forestry Division has recently completed 54 miles of fire breaks and seven miles of fire access roads in this area, and it is now considered to be the best protected area in San Diego County. No additional improvements are planned until other areas are brought up to similar protection levels. The County is expected to adopt the Uniform Fire Code in early 1975, and has recommended amendments to the Uniform Building Code to increase fire safety requirements. Since 1972, the County has required installation of fire hydrants as conditions of approval for all lot splits and subdivisions, The County also has a weed abatement ordinance, but enforces

it on a complaint basis only.

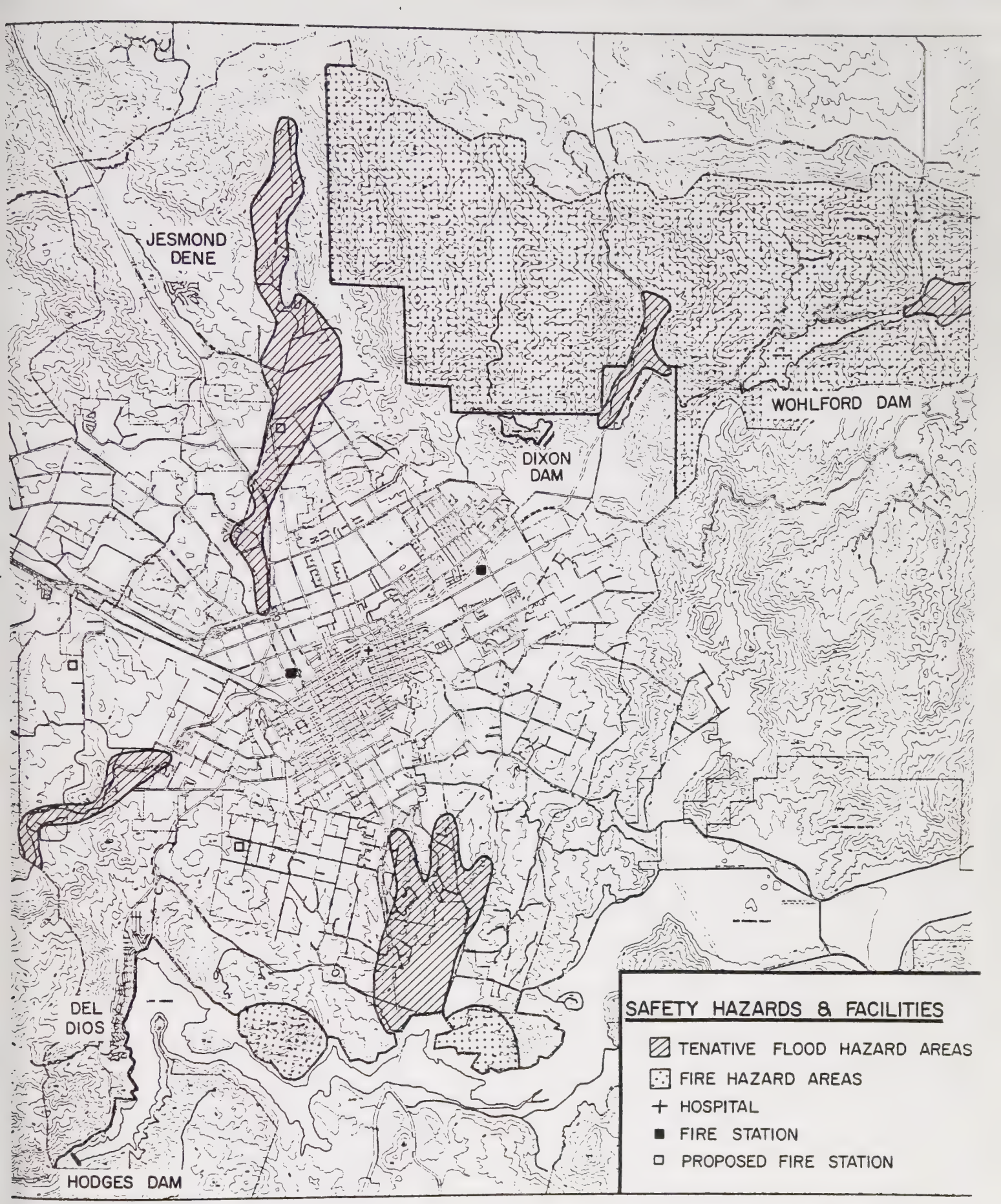
A 1973 Countywide Fire Study made several recommendations, some of which have been implemented, such as a roofing ordinance, establishment of a Fire Protection and Control Advisory Committee, and studies to consolidate fire districts, improve county-wide services, and coordinate communications.

The City Fire Department, in addition to its other capabilities, maintains special brush and grass rigs at each of its two existing stations, and has budgeted for a third which will be located in the new station #3 when constructed. The City also administers an annual weed abatement program.

## RECOMMENDATIONS

It is recommended that:

1. Fire safety be a continuing consideration in new project review.
2. The fire capabilities and ordinances and requirements of the City be maintained, and that efforts to reduce the City's fire rating be continued.
3. Rural standards, similar to those suggested by the County Supervisors Association of California, be adopted and a program for disseminating rural fire safety information be implemented.
4. The City encourage the County, by formal resolution, to implement the policies and action programs contained in their recently adopted Safety Element (see appendix D).
5. The City request the County to adopt an annual inspection program and fully enforce their weed abatement program within developed areas.




PLANNING DEPARTMENT
CITY OF ESCONDIDO, CALIFORNIA

GENERAL PLAN PROGRAM
ESCONDIDO PLANNING AREA

## GEOLOGIC HAZARD

The City's Seismic Safety element has not been completed at this time. However, the data gathered to date tends to indicate that there are no major faults or landslide areas within the Planning Area. Chapter 7.5 of the State Public Resources Code (beginning with section 2621) requires the State Geologist to designate special study zones along potentially hazardous faults by December 31, 1973; none have been so designated within the Planning Area. Likewise, the County Seismic Safety element does not indicate any faults or landslide areas within the Planning Area.

However, it is known that the valley floor, once a river bed or flood plain, is composed of unconsolidated alluvium. This type of soil is classified as having the greatest potential for causing structural damage during ground shaking due to seismic events. It is also suspected that the water table within the valley is rather high since use of wells have almost ceased thus eliminating depletion of ground water while urban irrigation with imported water adds to the ground water. Two indications of the water table level are the constant drainage into the Escondido Creek year-round, and the fact that ground water was encountered at a depth of ten feet in a test pit dug for other purposes at the Public Works site at Washington and Ash.

In light of this, two unlikely but potential problems will need evaluating within the Seismic Safety element: liquefaction and differential settlement. A third unlikely but potential problem for evaluation will be dam overtopping due to seiches (waves generated by seismic activity on enclosed bodies of water, or due to waves generated by landslides).

As a general statement, building foundation standards within the City are believed to exceed the requirements necessary for the soil types which exist here, and can only be reduced by the developer when proof in the form of soil and/or geology reports so recommend. Such reports are required for all major buildings and for hillside development. In addition, the Uniform Building Code, as adopted by the City contains provisions necessary for seismic consideration.

Recent State legislation requires dam owners to prepare inundation maps in case of possible dam failures. Associated with this is the State requirement to prepare evacuation plans for areas below dams. These items are required to be part of the City's emergency plans and their Safety and Seismic Safety Elements.

Upon completion of the Seismic Safety element, the Safety element may require amendment to include consideration of any seismic hazards identified.

## RECOMMENDATIONS

For the present, it is recommended that existing policies and procedures be maintained, in terms of requiring soils and/or geology reports for major buildings and hillside development.

The County Seismic Safety element suggests a central county-wide information data bank for seismic and geologic information be established. It is recommended that the City encourage the establishment of such a data bank, and participate in providing input.

It is further recommended that copies of soils reports and geologic reports submitted to the City be filed in one central location and that such information be

utilized to evaluate proposed projects and environmental impact reports at the earliest possible project stage.

## FLOOD HAZARD

In January, 1916, Escondido was struck by two major storms which left nearly 18 inches of rainfall in ten days. The resulting floods were by far the worst that have ever been recorded in the area. At the peak of the record storm and for a lengthy time thereafter, much of the valley was inundated. During this time it was estimated that flood waters were one-half mile wide through a large portion of the City. Damage was severe and widespread throughout the area. Merchandise in business areas was destroyed or damaged; railroad, traffic, and mail services were disrupted for several days.

Another storm struck Escondido in February, 1927, and left 14.5 inches of precipitation in six days. This storm also left widespread damage. The areas surrounding the Santa Fe Depot in the western portion of town were severely flooded. Damage to bridges and roads was extreme.

In 1969, a total of more than 13 1/2 inches of rain fell during January and February. Runoff was heavy due to the soils being saturated. The improved flood control channel and storm drain system prevented major flooding from occurring, although the bridge being constructed on Ash Street was damaged. There was an estimated $250,000 of damage to streets and localized flooding which caused some damage to 75 homes occurred where storm drains were lacking or on-site drainage was inadequate. The flood control channel was reported to be about one-half full, and Lake Hodges reported to be 15 feet from the top.

According to the General Plan Basic Research Report, as of January 1970, the yearly urban damage caused by direct and indirect flood waters amounted to $529,800 in structural damage and $79,800 in silt damage respectively. Approximately 3,000 acres of flood plains had been developed, increasing yearly at the rate of 50 acres. It was estimated that within 25 years the entire flood plain would be in residential, commercial and industrial use. A total of 1,838 acres was subject to flooding from a storm recurring (like that of 1916) once every hundred years.

In order to deal with this problem, the City, with aid from the Soil Conservation Service, undertook the task of constructing a major flood control channel to improve Escondido and Reidy Creeks, the two major water courses in the Valley. To date, Escondido Creek is totally channelized from the east to the west City Limits, the easterly portion and its associated debris basin now nearing completion. Reidy Creek has been channelized from Highway 78 south to its confluence with Escondido Creek.

These improvements, however, do not by themselves solve the flooding problem without an associated system of storm drains to carry storm water and runoff to these major channels. Therefore, in 1968 the City adopted a Master Plan of Drainage as an element of the General Plan.

Various portions of this system have been completed, and a plan to bring the Master Plan of Drainage up to 90 to 95% completion within five years has been proposed. The remaining 5 to 10% of the system is considered minor and can be completed as development occurs. An associated study of methods to finance this and other categories of capital improvements is now under consideration.

In conjunction with this, the City has adopted an Open Space Conservation Element which proposes to preserve certain water courses in a natural condition, where such courses have scenic as well as drainage value.

In order to qualify for Federal flood insurance, the City must identify flood hazard areas and apply a system of protective controls. The City, in conjunction with the County and the Army Corp of Engineers, is currently preparing such maps, and has adopted a flood plain zone which can be applied to such areas when they are accurately defined.

The sum total of these programs: the completion of the Master Plan of Drainage improvements, the identification of flood plains for natural channels, and the subsequent application of protective flood plain zoning, should eliminate all but minor nuisance flood hazard.

## RECOMMENDATIONS

1. That the City adopt a capital improvement budget which includes funding for the balance of the storm drain system.
2. That the City actively pursue the identification of flood hazard areas and apply protective measures where necessary to qualify affected citizens for flood insurance.

## EMERGENCY PREPAREDNESS

In December, 1950, the City Council adopted Resolution No. 663 for a Master Agreement for Mutual Aid which called for cooperation among government agencies in emergencies related to Civil Defense and disasters such as fire, flood, storms, epidemics, riots and earthquakes. This was superceded in September, 1972, by the Disaster Preparedness Ordinance (Ordinance No. 1527) which was based on the California Emergency Services Act, and led directly to the formulation of the City's Emergency Plan, City of Escondido, adopted by Resolution No. 74-1 in January, 1974.

The City, through its Emergency Plan, City of Escondido, is a party to the Unified San Diego Emergency Service Agreement. This agreement provides for a standardization of plans for all communities in the County, for mutual aid in time of emergency, and, as detailed, a systematic procedure for emergency operations, education and information distribution. Under the terms of this agreement, each local government is responsible for the direction of disaster operations within its jurisdiction. In case of a major disaster confined to one city, the County will provide aid and assistance, and will coordinate aid and assistance offered by other jurisdictions and agencies. In case of an area disaster, coordination of effort is by the Operational Area Coordinator. Law enforcement mutual aid is coordinated by the County Sheriff while direction is provided by the local political jurisdiction. The overall coordination of fire mutual aid is through the Area Fire Coordinator; the operational area is further subdivided into six zones, each with its own zone coordinator.

The City's plan more specifically describes individual tasks and duties and the local official's assignments. The purposes of the City's plan are to

1. Provide a basis for the conduct and coordination of operations and the management of critical resources during emergencies.
2. Establish a mutual understanding of the authority, responsibilities, functions, and operations of civil government in the City of Escondido during an emergency.
3. Provide a basis for incorporating into the City emergency organization those non-governmental agencies and organizations having resources necessary to meet foreseeable emergency requirements.

The objectives of the plan are to:

1. Plan for continuity of government.
2. Provide a basis for the direction and control of emergency operations.
3. Save lives and protect property.
4. Repair and restore essential systems and services.
5. Provide for the protection, use, and distribution of remaining resources.
6. Coordinate operations with the emergency services organizations of other jurisdictions.

Both the City's and the County's plans are reviewed and updated annually. In addition, in early 1973 the Unified San Diego County Disaster Council requested the California Office of Emergency Services and the Federal Defense Civil Preparedness Agency to provide on-site assistance (OSA) to all member jurisdictions. The OSA program is a combined state and federal effort to assist county and city officials in improving their emergency response and operational capability to cope with extraordinary emergencies or major disasters.

In response to this request, OSA teams and representatives of the County's OES conducted local surveys and meetings in August and September of 1973, and made written recommendations concerning improvements for emergency preparedness. These recommendations have been or are being implemented or studied for implementation either through the regional plan or the City's local plan.

In addition to the local and regional emergency preparedness plans, both of the school districts and the local hospital have their own emergency plans. A recommendation of OSA was that these plans be coordinated. This has or is being done. For instance, under the regional plan, Palomar Hospital is designated as a Packaged Disaster Hospital, and Escondido High School is designated as a Planned Operating Site.

One important aspect of the local plan which has not been accomplished to date is the formulation of individual task plans. It is recommended that this be pursued with due diligence.

The City is also studying the creation of a local "911" program which, when implemented, would allow citizens to dial a universal three digit number (911) for any emergency, describe the emergency, and be connected to the proper responding agency. This program is designed to reduce valuable response time to a minimum by eliminating confusion and delay caused by searching for such information or contacting the wrong response agency.

The City's new police facility is currently under construction with completion scheduled for the latter part of 1975. This facility will include a complete Emergency Operating Center designed with full facilities, including a new and updated communications system, to accomodate the E.O.C. staff, and will have a protection factor consistent with federal requirements.

In addition to the City's Emergency Plan, the City is also party to the San Diego County Mutual Aid Agreement (Resolution 4322, September, 1969), which superceded previous agreements with the City of Vista and San Marcos Fire Protection District; a Mutual Agreement for Fire Protection with the Division of Forestry which was adopted in April, 1961, renewed in 1966 and 1971 and scheduled for review in 1976; and the State of California Law Enforcement Mutual Aid Plan (Resolution No. 515, October 1945) for police mutual aid among all levels of California Political units.

## RISK

Risk is the chance of damage or injury occuring over some period of time and infers exposure to hazard or danger. There is no such thing as a perfectly hazard-free environment. Natural and man-made hazards of some kind and degree are always present. If risk can be identified, then risk reduction measures can be adopted, resulting in a reduced amount of damage and casualties over a given time.

The type of risks for our purposes can be divided into three groups: 1) The risk of bodily damage or death, 2) the risk to property, and 3) the risk of disruption of services and institutions. These cannot always be totally independent considerations. Measures to reduce the risk to one of the above groups will normally reduce risk to one of the other groups.

It is fairly obvious that the reduction of personal risk should receive highest priority, then the risk to property and public disruption depending on the circumstances involved. The central question is "how safe is safe enough?" Closely related to this question is "how much should be expended to further reduce risk?".

The Council of Intergovernmental Relations (CIR) guidelines for the Safety Element of the General Plan defines the levels of risk as follows:

| | |
|---|---|
| Acceptable Risk: | The level of risk below which no specific action by local government is deemed to be necessary. |
| Unacceptable Risk: | Level of risk above which specific action by government is deemed to |

be necessary to protect life and property.

Avoidable Risk: Risk not necessary to take because individual or public goals can be achieved at the same or less total "cost" by other means without taking the risk.

The CIR guidelines further suggest that the acceptable level of risk for each identified category be defined through the public hearing process. The next logical step would then be for the City to adopt plans and programs to reduce identified risks to levels determined to be acceptable.

In terms of the elements discussed in this report, many programs related to the expenditure of funds to reduce risk have been defined in terms of commitments through the budgetary process, adopted plan elements or capital improvement programs. For instance, the risk of a major flood has been all but eliminated through channelization and improvement of major drainage courses. Additional reduction of the risk of localized flooding is proposed through the committment to implement the remaining portions of the Master Plan of Drainage.

Another example is the emergency preparedness plan which defines the specific actions the City will initiate to respond to the potential occurrence of certain hazardous events.

How cost is related to the reduction of risk can be demonstrated by looking at fire protection. Statistics are available on the average annual property

damage and deaths or injury due to fire. This level of protection results in a certain fire rating that translates to dollar cost for fire insurance for the citizen. It could be determined what the dollar cost would be to upgrade fire service, reduce risk, monetary loss, and fire rates and, through the public hearing process, determine whether the public is willing to finance such cost based on potential benefits.

The level of risk of two additional elements are at this time unknown: those of seismic risk and inundation due to dam failure. When these studies are considered, the level of acceptable risk should be defined through the public hearing process, and thus become the basis for formulating any necessary programs of mitigation.

## CIRCULATION

Adequate and efficient roadways are a necessary safety element for the movement of emergency vehicles and evacuation of citizens from hazardous areas.

The City has adopted a Master Plan of Circulation which designates a hierarchy of street functions such as major arterials, collector streets, etc., and sets forth minimum standards for right-of-way widths and travelways.

The City also has adopted technical standards which include the minimum radius for cul-de-sacs, and maximum length of cul-de-sac streets. These standards are directly related to the needs of emergency vehicles.

New developments are subject to review by the various City departments and, again, internal circulation and its relationship to external streets is one of the items that receives scrutiny.

The City is currently working on a capital improvement program, one element of which is to provide funding for street improvements to continue implementation of the circulation plan.

A study is also under way to determine circulation needs within the hillside areas. Although a reduction of flat-land standards may be desirable, the safety aspect of circulation needs will also need to be considered.

## PEAK WATER LOAD

The availability of water in sufficient amounts and pressures is necessary for adequate fire protection.

The City has defined the water requirements for these purposes, and imposes conditions necessary to insure availability in all new developments, including upgrading of off-site facilities where necessary. The City standards are based on providing a loop system so that water service will not be lost due to a break at one end of a line.

Upgrading of existing facilities and the provision of new facilities is occurring as part of a continuing program.

The City is presently constructing a water filtration plant at the Dixon Dam site. When completed, the plant will have a reservoir for filtered water, a capacity to process 37.5 million gallons per day (MGD) and the potential to be expanded to 75 MGD. Completion of this facility is designed to overcome existing storage deficiencies for peak use and fire demand, and provide for future capacity.

## EVACUATION ROUTES

The prevailing view of disaster and emergency planners is that the evacuation of neighborhoods or areas of the City during periods of emergency tends to complicate the solution of the involved problems, and actually precludes the effective movement of emergency vehicles and personnel. There may be times when evacuation on a limited scale is the only solution. Under these circumstances, the people should be evacuated to neighborhood and community schools, hospitals and public facilities, where they may receive adequate care and treatment.

In the event of a major disaster, the Disaster Council (organized and discussed in the Emergency Plan City of Escondido) might feel that evacuation of portions of the entire City is necessary. The procedures to implement evacuation routes should follow procedures established in the Emergency Plan.

The evacuation of the entire city could best be done by the freeways and major highways that serve the City. These routes; I-15, Highway 78 and County Highway S-6, are shown on the evacuation routes map.

In the event of a disaster in a localized portion of the City, the prime arterials, major roads and some collector roads would better act as evacuation routes. These routes are designed to move the residents away from the affected areas to unaffected areas, emergency aid facilities and to routes that lead out of the City. The planning area is divided into five general areas; the downtown, and four outlying quadrants, determined by using major roads as boundaries. The evacuation routes are listed below and are shown on the

evacuation route map.

Area A: The Northwest:

Country Club Lane; El Norte Parkway; Nordahl Road; and Rock Springs Road.

Area B: The Northeast:

El Norte Parkway; Ash Street; Midway; Washington; and Valley Center Road.

Area C: The Southeast:

Bear Valley Parkway; San Pasqual Road; and Felicita Road

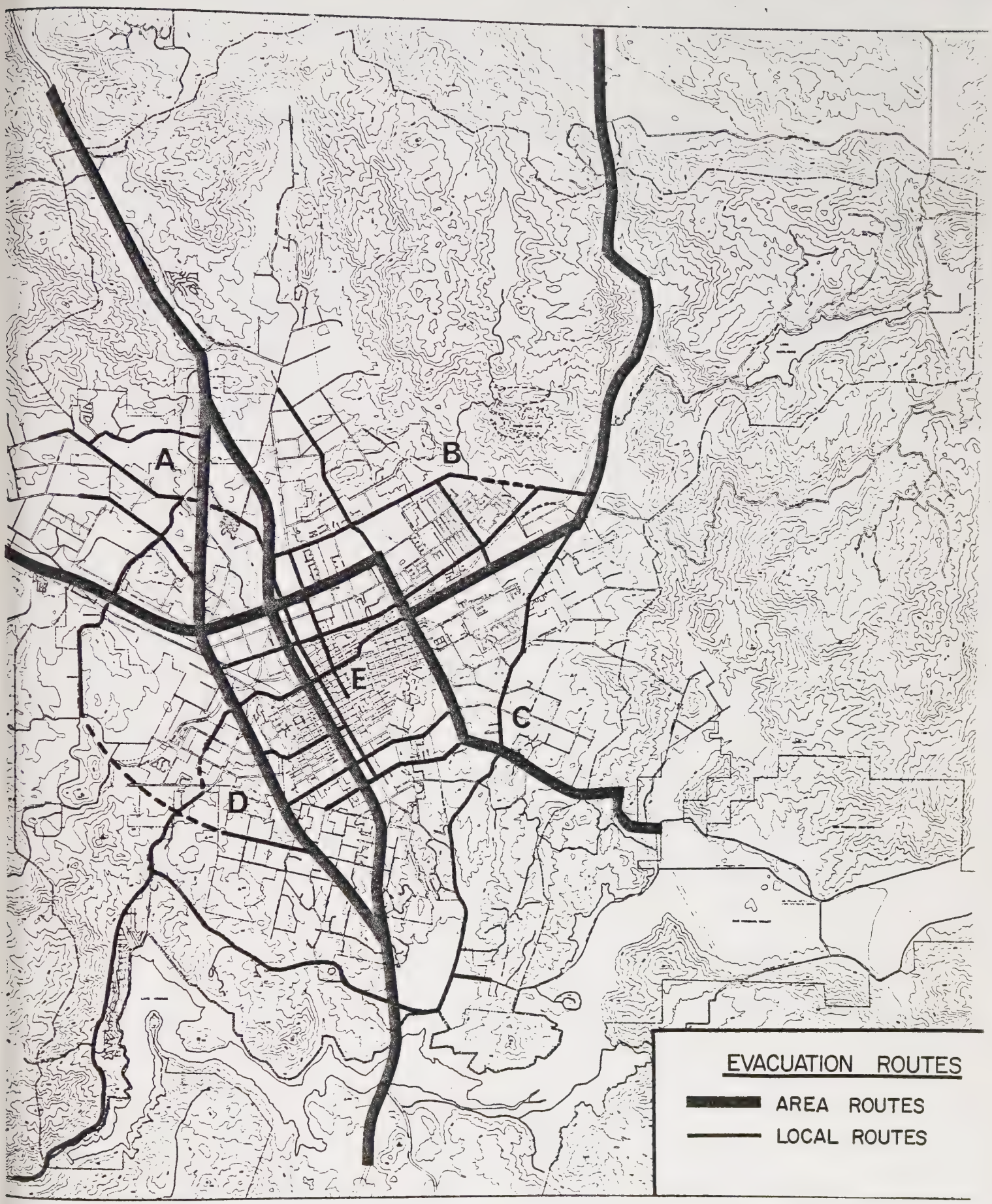
Area D: The Southwest:

Valley Parkway; Via Rancho Parkway; Felicita; and Citracado Parkway.

Area E: The Downtown:

Valley Parkway; Ninth Avenue; Broadway; Washington; Escondido Boulevard; and Escondido Parkway.

As mentioned previously, required potential dam inundation studies will be required to include evacuation plans. When completed, these studies may require modification of the routes proposed herein.




PLANNING DEPARTMENT
CITY OF ESCONDIDO, CALIFORNIA

GENERAL PLAN PROGRAM
ESCONDIDO PLANNING AREA

## EXISTING CODES, ORDINANCES AND PLANS

The City Council and citizens of Escondido have been aware of, and guided by, safety considerations throughout the development and evolution of the City. This concern can be seen in the various codes, ordinances and plans adopted in the past. The following list, though not complete, illustrates some of the past accomplishments:

1. Uniform Building Code: provides "minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures within the City and certain equipment specifically regulated here."

The Uniform Building Code was first adopted in December 1930 (Pacific Coast Conference Building Code, 1930 Edition) and has been in effect since then, being revised periodically. The Code has also been adopted by San Diego County, so it regulates construction in the unincorporated areas also. The Code applies to the construction, alteration, moving, demolition, repair and use of any building or structure within the City.

2. Uniform Fire Code: prescribes "regulations consistent with nationally recognized good practice for the safeguarding to a reasonable degree of life and property from the hazards of fire and explosion arising from the storage, handling and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises".

The Uniform Fire Code has been in effect since June 1968. When the City Council adopted the current version, several amendments were included which strengthened certain provisions including access for fire fighting equipment, fire protection (hydrant spacing), and fire flow requirements.

3. Zoning Ordinance: serves the public health, safety, comfort, convenience and general welfare by regulating the use of buildings. In addition, it regulates the location, height, bulk, and size of buildings; provides for yards, courts and other open spaces and establishes general provisions and standards with the aim of preserving a wholesome, serviceable and attractive community.

4. Circulation Plan: provides for the safe movement of people and goods throughout the community by planning routes and establishing standards for roadway construction.

5. Conservation and Open Space Element: provides for the preservation of open space as necessary to protect public health, safety and welfare. It proposes to conserve open space needed for natural drainage channels, flood plains, fire hazard areas, and areas subject to geologic hazard.

6. Grading Ordinance: presently adopted as part of the Uniform Building Code, the grading ordinance has as part of its purpose the same provision of minimum standards to safeguard life or limb, health, property and public welfare; more specifically, the grading relating to slope stability, erosion and drainage, and

consideration of geologic hazards. It further gives the City authority to halt or correct hazardous conditions or practices.

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# APPENDIX A

California Council on Intergovernmental Relations - General Plan Guidlines

## SAFETY ELEMENT

### 1. AUTHORITY

Government Code Section 65302.1 requires a safety element of all city and county general plans, as follows:

> A safety element for the protection of the community from fires and geologic hazards including features necessary for such protection as evacuation routes, peak load water supply requirements, minimum road widths, clearances around structures, and geologic hazard mapping in areas of known geologic hazard.

### 2. THE SCOPE AND NATURE OF THE SAFETY ELEMENT

The objective of this element is to introduce safety considerations in the planning process in order to reduce loss of life, injuries, damage to property, and economic and social dislocation resulting from fire and dangerous geologic occurances.

A. General policy statement that:

(1) Recognizes safety hazards

(2) Identifies goals for reducing hazard

(3) Specifies the level of acceptable risk

(4) Specifies objectives to be attained in reducing safety hazards as related to existing and new structures

(5) Sets priorities for the abatement of safety hazards, recognizing the variable frequency and occurrence of hazardous events.

B. A map showing the location and extent of known geologic hazards.

C. Standards and general criteria for land use and circulation relating to:

(1) Fire prevention and control

(2) Geologic hazards

D. Consideration may be given to the crime prevention aspects of land use development such as planning for "defensible space".

3. METHODOLOGY

A. Identification, mapping and evaluation of existing and potential hazards, both as to severity and frequency of occurrence. Analysis of hazardous land use relationships.

B. With maximum citizen input "acceptable risk" should be determined. In making this determination, it should be kept in mind that any attempt to develop the appropriate planning response to potential hazard involves a judgement, either explicit or implicit, of how much risk is acceptable. There is no such thing as a perfectly hazard-free environment. Natural and man-made hazards of some kind and degree are always present. However, efforts can be productively undertaken to try to mitigate the consequences of known hazards.

In the context of the Safety Element, the problem of risk is one of public policy and the appropriate allocation of public resources to mitigate hazards. The central question is, "how safe is safe enough?" The planner's responsibility is to provide a framework in which a communitywide, as opposed to an individual, response to the question can be meaningful. The first of several essential steps is the recognition of the presence of a hazard. Much of the planning of the past has proceeded without enough knowledge of the natural forces at play in a given area.

Once a problem has been recognized, considerable effort is required to evaluate its likely severity, frequency, and the characteristics of the area involved. This step should take into account the benefit/cost ratio of reducing hazard, acknowledging the intangibles involved, and comparing it with that of other projects. The factors of voluntary and involuntary exposure to risk must be considered in reaching a decision.

C. Define nature and magnitude of effort required to correct or mitigate hazards.

D. Define general nature of regulations and programs needed to prevent or mitigate the effects of hazards in the developed and natural environments.

E. Exchange information and advice with fire, police and public works departments, other agencies, and specialty personnel in the formulation of the element.

## 4. DEFINITION OF TERMS

Acceptable Risk: The level of risk below which no specific action by local government is deemed to be necessary.

Unacceptable Risk: Level of risk above which specific action by government is deemed to be necessary to protect life and property.

Avoidable Risk: Risk not necessary to take because individual or public goals can be achieved at the same or less total "cost" by other means without taking the risk.

Defensible Space: Concept of urban space designed to inhibit crime by utilizing the proprietary concerns of residents. Key ingredients in designing defensible space include: improving the natural capability of residents to visually survey the public areas of their residential environment; enhancing spheres of territorial influence within which residents can easily adopt proprietary attitude; and enhancing safety through the strategic geographic location of intensively used community facilities.

## 5. RELATIONSHIPS OF THE SAFETY ELEMENT

### A. To Other Elements:

(1) The Safety Element contributes to developing land use standards and policies. These will relate type and intensity of use to the level of risk from fire and geologic hazard, to the effect of development upon that risk, and to the availability of services and facilities to combat them.

The Safety Element also contributes basic standards and requirements to the circulation and optional public utilities elements, and will have important implications for the open space and conservation elements.

(2) Because of the strong relationship with the Seismic Safety Element, the local planning body may wish to prepare these two elements simultaneously or to combine the two elements into a single document.

B. To Other Factors:

(1) Social: The element is directed at reducing social costs due to injury, loss of life, or public or private dislocations increasing the sense of community security and well-being.

(2) Economic: The element should be directed at reducing costs of direct property loss and economic dislocation.

(3) Environmental Impact: The Safety Element provides the the policy directives for reducing adverse impacts on both the built and natural environments of major safety hazards.

C. To Other Agencies:

(1) The preparation of the Safety Element would also be facilitated by identifying, and securing the cooperation of major Federal, state regional and private owners of land in a largely natural state, which affects the potential fire hazard. Such agencies would include, for example, the national and state park services.

(2) Local planning bodies are encouraged to enter into joint planning and the execution of mutual assistance pacts related to safety hazards materially affecting more than one planning jurisdiction.

6. IMPLEMENTATION

A. Concurrent or subsequent revision of other general plan elements to incorporate safety policies and criteria.

B. Addition of capital improvements as may be necessary for the mitigation and control of safety hazards to the capital improvement program.

C. Review and possible amendment of zoning, subdivision and site development regulations to incorporate safety provisions.

D. Formulate building and fire safety inspection programs of buildings and premises to identify fire and other safety hazards.

E. Provide input to contingency plans for major disaster or emergencies.

F. Provide for ongoing review of major public and private development proposals by fire and police departments to insure compatibility with safety objectives.

## APPENDIX B

## FIRE SAFETY GUIDES FOR CALIFORNIA WATERSHEDS.

The following information is quoted from a booklet entitled "Fire Safety Guides for California Watersheds", prepared by the County Supervisors Association of California in cooperation with the Forest Fire Protection Agencies, 1965.

### RECOMMENDED MINIMUM FIRE SAFETY REQUIREMENTS

In California today there is a widespread lack of adequate fire safety measures to govern new developments in the watersheds and to enable fire agencies to move safely and effectively to meet current problems of life and property protection.

Requirement of safety measures to meet these problems will decrease the risk to the fire hazard area, decrease the exposure hazard to life and property owners to provide a greater measure of self protection with a greater chance of escaping fire damage in the absence of fire equipment, and provide safe and adequate routes of travel for firefighting equipment and residents.

Within designated watershed hazard areas, for the protection of present and future improvements and their users and occupants, the following fire safety requirements are recommended.

#### Structural Fire Protection Standards

It is recommended that structural fire protection practices as recognized by fire protection agencies be planned and provided for subdivisions as a contigency for the approval of proposed new developments in wildland areas.

#### Safe Ingress and Egress

Area development should provide for safe and ready access for fire and other emergency equipment and for routes of escape which will safely handle evacuations. Therefore, road and street system designs should provide maximum circulation consistent with topography to meet fire safety needs.

1. Require at least two different ingress-egress routes.
2. Require a 60-foot right of way for the construction of two 12-foot traffic lanes, two 8-foot parking lanes, and two 10-foot roadside strips upon which the fire hazard should be required.
3. Limit cul-de-sacs to 600 feet terminated by a turn-around right of way not less than 90 feet in diameter.
4. Street grades should be limited to 12% except for short distances when topographic conditions make lesser grades impractical.

5. No street or road should have a centerline radius of curvature of less than 50 feet.

6. The responsible fire agency may remove and clear within 200 feet on each side of every roadway all flammable vegetation or other combustible growth and may enter upon private property to do so. This should not apply to single specimens of trees, ornamental shrubbery or cultivated ground cover such as green grass, ivy, succulents or similar plants do not form a means of readily transmitting fire. As used in this section "roadway" means that portion of a highway or private street improved, designed, or ordinarily used for vehicular travel.

Fire Protection Water Facilities

Water is the most important single factor in fighting structural fires and is vital in suppressing watershed fires. Therefore, to assure adequate and reliable water supplies for community fire protection in hazardous areas, the following minimum requirements are recommended:

1. The size of water distribution mains on which fire hydrants are located should be a minimum 6 inches in a system designed to permit circulating water flow as may be practical. Hydrant spacing should not exceed 660 feet with minimum fire flow of 500 g.p.m. required for population densities of two or less single family residences per acre; for population densities of more than two dwellings per acre, hydrant spacing should not exceed 330 feet with a minimum fire flow of 750 g.p.m., and more where structural conditions require. Water source facilities should have the capacity to support the required fire flow for a minimum duration of two hours in addition to the maximum daily flow requirements for other consumptive uses.

   Water storage may be required to assure the required minimum duration fire flow of two hours with the single most serious interruption to power lines, water mains, and to pump units. The local fire authority should adjust the water quantities and duration set forth on the basis of local conditions, exposure, congestion, and construction of buildings.

2. The size, type, and location of fire hydrants should meet the approval of the responsible fire authority and of applicable state and county regulations, with a minimum size of waterway not smaller that the size of the street main up to a nominal 6-inch size. A gate valve should be placed on the connection between main and hydrants.

3. Those separately developed dwellings with an individual private water supply should provide an acceptable guaranteed minimum supply of water, above the amount required for domestic needs, that will be adequate in the judgment of the fire authority for fire protection for the structures.

Clearance Between Brush or Vegetative Growth and Structures

Brush exposure is a primary hazard to structures. Brush ignites readily, burns with intense heat, and fire in it moves rapidly. To reduce structural exposure to flames and radiant heat, and to give firemen a reasonable chance of saving structures, and to prevent structural fires from becoming forest fires, minimum clearance requirements are necessary. In 1963 the State of California enacted the below quoted Public Resources Code clearance law. This is a minimum statewide clearance law. The enactment of local ordinances is recommended where more restrictive fire safety clearance measures may more closely fir local conditions. The recommended clearance requirements may be included in local ordinances as more restrictive measures.

1. State Forest and Fire Law Clearance Requirements.

Public Resources Code 4291: Any person who owns, leases, controls, operates, or maintains any building or structure in, upon, or adjoining any mountainous area or forest-, brush-, or grass-covered lands or land covered with flammable material shall at all times do all of the following:

(a) Maintain around and adjacent to such building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This subdivision does not apply to single specimens of trees, ornamental shrubbery, or similar plants which are used as ground cover, provided that they do not form a means of rapidly transmitting fire from the native growth to any building or structure.

(b) Maintain around and adjacent to any such building or structure additional fire protection or firebreak made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from such building or structure or to the property line, whichever is nearer, as may be required by the State Forester when he finds that because of extra hazardous conditions a firebreak of only 30 feet around such building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from such building or structure and less than 18 inches in height above the ground may

be maintained where necessary to stabilize the soil and prevent erosion.

(c) Remove that portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe.

(d) Maintain any tree adjacent to or overhanging any building free of dead or dying wood.

(e) Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.

(f) Every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel shall be provided and maintained at all times with a screen over the outlet. Such screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.

2. Recommended Clearance Requirements:

(a) Lot size and placement of buildings thereon should be such that adequate clearance of hazardous flammable vegetative cover may be performed within the limits of the owner's lot.

(b) The above requirements to maintain an effective firebreak around structures in the hazardous fire area shall apply to both persons owning or controlling such structures and to persons owning or controlling any land adjacent to such structures.

(c) Should these owners fail to effect the required firebreak clearance following proper notice, the governing authority may cause a lien against the property upon which the work was accomplished.

Building Spacing

Slope has an important bearing on fire behavior through its effect on wind conditions and heat radiation. Consequently, and irrespective of brush clearance requirements, more space between structures is required in mountainous areas than is the case on valley floors and coastal plains.

1. Buildings should be spaced at least 30 feet apart (minimum 15-foot setback) to minimize the exposure risk from an adjacent structural fire and the conflagration potential of the spread of fire from structure to structure. This spacing may be altered to a minimum of 5 feet from the building to the property line where buildings have features compensating for exposure to radiated heat and the induction of sparks such as fire-resistive materials,

smooth exterior wall surfaces and overhangs.

Local fire authority shall be guided by but may adjust spacing requirements as set forth above on the basis of local conditions of slope, exposure, and the construction of buildings.

2. Building densities, as determined by minimum buildable lot area and spacing between structures, would be approximately four dwellings per acre for slopes up to 15 percent and two dwellings per acre for slopes from 15 to 30 percent. For slopes steeper than 30 percent, densities would be limited to one unit for every three to five acres, or structural development prohibited.

Building construction and Occupancy

Construction should be to the standards prescribed by comprehensive Buildings Codes and Fire Prevention Codes which give special consideration as needed to mountain hazard areas. Important considerations are:

1. Roofs and exteriors of buildings should be of fire-resistant materials.
2. Screening of roof, attic, and underfloor openings should be required.
3. Suitable fire-resistant construction should be required for all building projections (canopies and eaves) and the balconies, decks, and unenclosed underfloor areas of stilt-type or cantilevered homes.
4. Consideration should be given to the problems of large window surfaces facing exposure hazards.

Mutual understanding of the fire and construction problems in the hazardous mountain areas can lead to a strengthening of standards and to a degree of standardization which would be advantageous to both the construction industry and to the regulatory agencies.

Community Firebreaks

Firebreaks separating communities or clusters of structures from the native vegetation are recommended. Such firebreaks would be more properly termed "fuel-breaks" or "greenbelts" because all vegetation need not be removed, but thinned out or landscaped so as to reduce the volume of fuel.

1. All easements for firebreaks for fire safety of built-up areas should encompass access for firefighting personnel and equipment, which may mean motorized travel in some cases; such easements should be dedicated to this specific purpose by being recorded.
2. Community firebreaks should be coordinated with over-all firebreak/fuel break plans of the mountain area.

Division of Land

In order to secure the same standards of fire safety in areas developed outside of regular subdivisions as obtained within regular subdivisions, any division of land into two or more parcels for the purpose of lease, sale, conveyance, or transfer, whether immediate or future, and which is not defined as a subdivision, should be subject to review and prior approval by the appropriate county authority.

Street Names and Numbers

To faciltate fire location and to avoid delays in response, all roads, streets, and buildings should be designated by name or number clearly visible from the main travelled roadway.

Refuse Disposal

All areas planned for intensive development should include a suitable plan for the disposal of flammable refuse. Refuse disposal shall be in accord with county or local plans or ordinances, and shall not be less than State requirements (see Public Resources Code 4371-75, Health and Safety Code 4476). Where practical, disposal should be by means other than open burning.

General

It is imperative that fire safety standards be included within subdivision and zoning ordinances with the same emphasis that is now given to the threat of flood hazard and that all requests to build within the hazardous fire area be routed by local planning commissions to the responsible fire authority for applicable fire regulations and for recommendations and approval.

Authority for local fire safety ordinances is found in Public Resources Code 4117.

> "Counties, cities and counties, cities, and districts may adopt ordinances, rules, or regulations to provide fire prevention restrictions or regulations that are necessary to meet local conditions of weather, vegetation, or other fire hazards. Such ordinances, rules, or regulations may be more restrictive than State statutes in order to meet local fire hazard conditions."

It must be recognized that, because of the complex fire protection problem and because of high watershed values, there are some areas that cannot safely be developed at the present level of knowledge and should not be approved for development.

Landowners of existing developments in fire hazardous areas should strive to meet as many of the recommended fire safety requirements as they can and in the best manner possible notwithstanding, or course, the need to first comply with all requirements of State, county, city, and district laws and ordinances.

## FIRE NEEDS, PROGRAMS, COORDINATION

There are many aspects of over-all fire protection in the mountain areas not covered in the recommended minimum fire safety requirements for subdivided lands, but which have a direct bearing on the protection of these developed areas. Local planning authorities should be aware of and give specific consideration to the following:

### Public Works and Developments

1. Roads and Highways. Road networks should provide for alternate escape routes in the event evacuation becomes necessary. Roadways, as such should not constitute a hazard. Vegetation should be removed for a distance of not less than 10 feet on each side of the travelled section. As may be needed, and for additional distances on each side of roads and highways, the native vegetation should be thinned to reduce fuel hazard. Such "landscaping" with native vegetation to reduce hazard along rights of way should be a part of all public road programs.
2. Recreational areas, campgrounds, picnic areas, and other recreational developments concentrate people during dangerous fire weather and increase risk by additional use. All recreational developments should have planned access and escape routes, hazard reduction, and extra water for fire emergency use. Hazard reduction should include establishment of greenbelts around recreational developments. Reservoirs and other water sources which are open to the public are especially attractive to recreationists. Planning should take into account increased fire prevention and protection measures, and the handling of large numbers of people during emergencies. The facilities of such water developments, which should be accessible by road to mobile pumpers, should be utilized fully for fire protection.
3. Public utilities such as electric transmission lines, and other installations such as missile or communication facilities should be maintained sufficiently free of vegetation in the mountain hazardous areas so as not to constitute a risk.

### Land Treatment of Wildland Areas

The possibility of wildland conflagrations beyond the control of regular firefighting forces requires that regular fire organizations be supported by land treatment measures or fire defense systems designed to reduce hazard and facilitate fire control. These systems consist of fire access roads, firebreaks and fuelbreaks, water storage cisterns, heliports, safety areas, and fire reporting sources.

Wildland fire protection agencies should be encouraged to develop such land treatment systems and to tie in these systems with community firebreaks and facilities for the mutual fire protection benefit of the community and the wildland resources.

## Fire Agencies Needs

Because of ever-increasing use and development, fire problems in the mountainous hazard areas are increasing and changing. Fire problems in these developing areas should be periodically evaluated and fire agency needs reviewed. Needs to be considered as areas are developed are: basic manpower and equipment, fire station and response coverage, fire prevention programs, fire detection and dispatching systems, and inmate camp and work programs. Basic standards as used by the American Insurance Association could be used by any agency and added to if needed for their own use.

## Coordination

Coordination among all organized fire agencies is necessary for effective fire prevention and suppression in the mountain hazardous areas. Public safety has benefited by agency cooperation in the following fields:

1. Fire Prevention through co-op programs, mass education media, inspection of hazards.
2. Pre-Suppression by means of mutual aid agreements, equipment and labor policies, qualification requirements of regular personnel.
3. Emergency Action through evacuation plans, handling of traffic.
4. Law Enforcement through uniform application of laws, coordination in fire code standards, new legislation, zoning and closures.

Many departments and agencies of all levels of government are engaged in various programs involving short- or long-term planning affecting land use of the mountains. Because these plans and projects require consideration of basic fire protection needs or affect existing fire protection systems, it is imperative that local planning departments and fire agencies maintain close liaison with these departments and agencies.

## APPENDIX C

## RECOMMENDED FIRE-RETARDANT PLANTS FOR BRUSH FIRE PREVENTION IN HILLSIDE RESIDENTIAL AREAS

| Species | Height at Maturity | Drought Tolerance | Cold Hardiness | Erosion Control 0-30° | 30-60° | 60°+ | Maintenance |
|---|---|---|---|---|---|---|---|
| CATEGORY 1 — GREATEST FIRE RETARDANCE Succulents (moisture content 90-95%) | | | | | | | |
| *Carpobrotus edulis* (Hottentot Fig) | 12-18" | good | to 20°F. | + | | | medium |
| *Delosperma* 'Alba' (White Trailing Ice Plant) | 6-8" | very good | to 20°F. | ++ | + | | medium-low |
| *Drosanthemum hispidum* (Rosea Ice Plant) | 4-6" | good | to 20°F. | ++ | | | medium-low |
| *Lampranthus spectabilis* (Trailing Ice Plant) | 6-12" | good | 25-30°F. | ++ | | | medium-low |
| *Malephora crocea* (Croceum Ice Plant) | 6-12" | good | to 20°F. | ++ | + | | medium-low |
| *Malephora luteola* (Yellow Trailing Ice Plant) | 6-12" | good | to 20°F. | + | | | medium-low |
| *Portulacaria afra* 'Variegata' (Elephant's Food) | 12" | good | 25-30°F. | + | | | medium |
| *Sedum brevifolium* (Green Stonecrop) | 2-6" | very good | below 20°F. | + | | | medium-low |
| *Sedum confusum* | 6-12" | very good | 25-30°F. | + | | | medium-low |
| *Sedum rubrotinctum* (Brown Bean) | 6-8" | very good | to 20°F. | + | | | medium-low |
| *Senecio serpens* | 12" | good | to 20°F. | + | | | medium-low |
| CATEGORY 2 — Non-succulent plants, high leaf moisture content (80-95%) | | | | | | | |
| *Arctotheca calendula* (Cape Weed) | 12-15" | fair | 20-30°F. | ++ | + | | medium |
| *Gazania uniflora* (Trailing Gazania) | 6-10" | good | to 20°F. | ++ | + | | medium |
| *Osteospermum fruticosum* (Trailing South African Daisy) | 12-18" | very good | to 20°F. | ++ | ++ | ++ | medium |
| *Pelargonium peltatum* (Ivy Geranium) | 12" | fair | over 30°F. | ++ | + | | medium-high |
| CATEGORY 3 — Plants with medium-high leaf moisture content (70-80%) | | | | | | | |
| *Ajuga crispa* (Giant Ajuga) | 6-9" | poor | below 20°F. | + | | | high |
| *Atriplex semibaccata* (Creeping Australian Saltbush) | 12" | excellent | to 20°F. | ++ | ++ | ++ | medium |
| *Cerastium tomentosum* (Snow-in-Summer) | 4-6" | very good | below 20°F. | ++ | | | medium-high |
| *Myoporum parvifolium* | 6" | very good | to 20°F. | ++ | ++ | + | medium-low |
| *Santolina chamaecyparissus* (Gray Lavender Cotton) | 18-24" | excellent | below 20°F. | ++ | ++ | ++ | high |
| *Santolina virens* (Green Lavender Cotton) | 18-24" | excellent | below 20°F. | ++ | ++ | ++ | high |
| *Vinca major* (Periwinkle) | 18-24" | fair | below 20°F. | ++ | ++ | ++ | medium-low |
| *Vinca minor* (Dwarf Running Myrtle) | 6-12" | fair | below 20°F. | ++ | ++ | ++ | medium-low |
| CATEGORY 4 — LEAST FIRE RETARDANCE Plants with medium leaf moisture content (60-70%) | | | | | | | |
| *Baccharis pilularis* var. *prostrata* (Dwarf Coyote Bush) | 12-24" | excellent | below 20°F. | ++ | ++ | ++ | high |
| *Hedera canariensis* (Algerian Ivy) | 12-15" | poor | 25-30°F. | ++ | ++ | + | medium |
| *Hedera helix* (English Ivy) | 12" | poor | below 20°F. | ++ | ++ | + | medium |
| *Helianthemum nummularium* (Sunrose) | 6-8" | very good | 20-30°F. | ++ | | | medium-low |
| *Hypericum calycinum* (Aaron's Beard) | 12-15" | good | below 20°F. | ++ | + | | medium-low |
| *Teucrium chamaedrys* (Germander) | 8-12" | good | below 20°F. | ++ | | | medium-low |
| *Verbena peruviana* | 4-6" | very good | below 20°F. | + | | | medium-low |

Source: "Fire Retardant Plants for Hillside Areas". Los Angeles Depts. of Arboreta and Botanic Gardens, 1970.

# APPENDIX D

## COUNTY POLICIES AND ACTION PROGRAMS

## RELATED TO FIRE HAZARD

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| Policy | The County shall within its authority seek to reduce fire hazards to an acceptable level of risk as to be defined by an interdisciplinary team of professionals and laymen. |
| Action Program 1.11 | By resolution, support full and continued funding of the fire protection provisions of the Rural Development Act of 1972. Direct the Special Public Services Agency to seek such funds as they become available for the rural areas of San Diego County. |
| Action Program 1.12 | Advocate and support revisions in the State Penal Code to impose criminal liability on property owners for fires resulting from identified and uncorrected fire hazards. |
| Action Program 1.13 | Advocate and support state legislation which would provide tax incentives to encourage the repair or demolition of structures which are not classified as fire hazardous. |
| Action Program 1.14 | Direct the Fire Protection and Control Advisory Committee to study and report on the feasibility of fire agencies providing fire inspections of residences at time of sale. |
| Action Program 1.15 | Adopt an effective ordinance to require roofing material to meet specified fire safety standards in all high fire hazard areas. |

Action Program 1.16 — Encourage the International Conference of Building Officials to make changes in the Uniform Building Code that reflect improvements in structures from a fire safety standpoint. An example of proposed amendments which the County will support in principle are those currently recommended by the Fire Prevention Officers Association of the County to amend the 1973 U.B.C.

Action Program 1.17 — Adopt by 1975 a uniform fire code and require its strict execution.

Action Program 1.18 — Order the County Fire Services Coordinator, County Building Inspector and County Counsel to undertake a study to determine the cost, legality and need of:

a) Adopting county ordinance defining fire hazardous structures.

b) Conducting an inventory and evaluation of fire hazardous structures to include indentification of building occupancy-type, value, age, and social and economic characteristics of occupants.

c) Establishing priorities for the renovation, demolition, or necessary occupancy reduction of designated fire hazardous buildings.

Policy 1.2 — The County will consider in land use decisions, site constraints in terms of fire and geologic hazards. Within designated areas

where population or building densities may be inappropriate to the hazards present, measures shall be taken to mitigate the risk of life and property loss.

Action Program 1.21 Order the County Fire Services Coordinator to identify and classify brushland areas of varying severity of fire hazard and to specify the conditions under which development and use of these areas should occur. The objective of doing so is to keep damages from encroaching wildland fires to an acceptable level. Said study is to be taken with the cooperation of all concerned agencies including the California Division of Forestry, the U.S. Forest Service, and the Environmental Development Agency.

Action Program 1.22 The Environmental Development Agency (E.D.A.) shall undertake a study to determine the adequacy of land division regulations, the zoning ordinance, and other planning implementation mechanisms as they relate to fire safety.

In conjunction with the study, planning and fire authorities shall be encouraged to create examples of planning which can be visually translated to an existing problem area to illustrate the planning concept as it involves the basic relationship of fire protection to the development of brushlands. Such examples will be intended to help toward establishing a mutual understanding of problems by planners, land developers,

builders, engineers, and others concerned with land use.

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| Policy 1.3 | The County will encourage the planning and development of a countywide and fuel break and fuel management system. |
| Action Program 1.31 | Order the County Fire Services Coordinator to prepare a coordinated plan for fuel breaks and fuel management for areas within the authority of the Board of Supervisors. Encourage the cooperation of all concerned agencies in the preparation of the plan, including the C.D.F., U.S.F.S., and E.D.A. |
| Action Program 1.32 | Support full and continued funding of the fire protection provisions of the Rural Development Act of 1972. Direct the Special Public Services Agency to seek such funds as they become abailable for the rural areas of San Diego County. |
| Policy 1.4 | The County shall encourage the improvement of the delivery of fire protection services through functional cooperation of fire agencies, and seek gradual political consolidation which may lead to a single unified countywide fire protection system. |
| Action Program 1.41 | Ensure that the recommendations of the 1973 countywide fire study are executed; especially those relating to coordination, cooperation and consolidation of fire protection agencies and/or their programs. |
| Action Program 1.42 | Require that before approval of a subdivision adjacent to an organized fire district, said development annex to said |

district unless it can be proven that fire suppression services can be adequately provided in some other manner.

Policy 1.5 — The County shall expand its data base on fire hazards including the history of past fires, potential fires, hazardous conditions and new techniques in fire suppression and prevention, and related disciplines. It shall also utilize other available data bases such as the State's recently initiated California Fire Incident Reporting System (C.F.I.R.S.) program.

Action Program 1.51 — Direct the Special Public Services Agency to initiate a program to research and gather existing fire data for the San Diego region. The program will include the collection of information which will be useful for projects the office may undertake and which would be helpful to the various fire agencies in the County. For those programs which may be helpful to a large number of fire protection agencies, the County shall provide computer services consistent with the recommendation of the Countywide Fire Study.

Policy 1.6 — The County will expand, as necessary, public information programs related to the pbulic hazards presented in this element. Where it has no authority to direct, the County will encourage and support public service announcements, particularly via television during prime viewing time.

Action Program 1.61 — Advocate and support revisions in Federal Communications Commission Regulations which would require commercial stations to air a specified number of public service broadcasts

during prime time hours.

Action Program 1.62 — Direct the Office of Public Information and Communications to work with local television stations in preparing and scheduling brief public service announcements.